

REMARKS/ARGUMENTS

Applicant thanks Examiner for the detailed Office Action dated February 26, 2007. In response to the issues raised, the Applicant offers the following submissions and amendments.

Amendments

Claim 1 has been amended to focus on the structural features of the printhead that are associated with ion etching the monolithic wafer from both sides. Claims 9 to 16 have been cancelled in the interests of expediting prosecution.

Accordingly, the amendments do not add any new matter.

35 USC §103 - Claims 1 to 8

Claims 1 to 8 stand rejected as obvious in light of US 5,790,155 to Usui et al. The rejection of claims 9 to 16 is moot in view of their cancellation.

Amended claim 1 defines a structure that clearly differs from the Usui arrangement. The present invention has a monolithic wafer substrate with a plurality of liquid passages extending from the supply side to the ejection side. Each liquid passage is made up of two sections that extend from both sides and meet intermediate the supply side and the ejection side. The first section is the supply passage extending from the supply side of the wafer and the second section is the hole extending from the ejection side of the wafer. The supply passage is wider than the hole because it is a deeper etch and more prone to deviate. Keeping the hole relatively narrow allows the nozzle structures to remain small. This provides a reliable fluid communication between the nozzles and the opposite side of the wafer, which avoids the need for ink distribution conduits on the ejection side of the wafer. Skilled addressees will readily appreciate that the density of nozzles on the wafer is greatly improved if valuable wafer real estate is not occupied by distribution conduits.

The Usui printhead does not have any monolithic wafers that have passages etched from both sides such that one portion of the passage is wider than the other. The passages through each of the individual layers of the laminate structure 27 are of uniform width. The term 'monolithic' unambiguously distinguishes the laminated structure of Usui from the supporting substrate of the present invention. The plain meaning of 'monolithic' is 'a single, one piece, integral structure'. The individual ceramic layers within the Usui laminate may be monolithic, but none of them have a through0passage of non-uniform width.

Accordingly, the cited reference fails to teach all the elements of amended claim 1. It follows from the above that dependant claims 2-8 are likewise novel and inventive.

Conclusion

It is respectfully submitted that the Examiner's rejection has been successfully traversed and the application is now in condition for allowance. Accordingly, favorable reconsideration is courteously solicited.

Very respectfully,

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